查询DGP12U5D12供应商

DGP12 SERIES
DUAL OUTPUT

DESCRIPTION

The dual output DGP12 Series provides symmetrical +/– outputs from 5 volts to 15 volts in packages that provide power densities up to 7 watts per cubic inch (0.43 watts per cm^3). Designed to operate on ultra-wide input voltages from 3.5 to 16 volts, and with remote ON/OFF capability, the DGP12 supplies power from battery or system sources . The fully isolated, shielded case allows precise operation in sensitive environments.

FEATURES

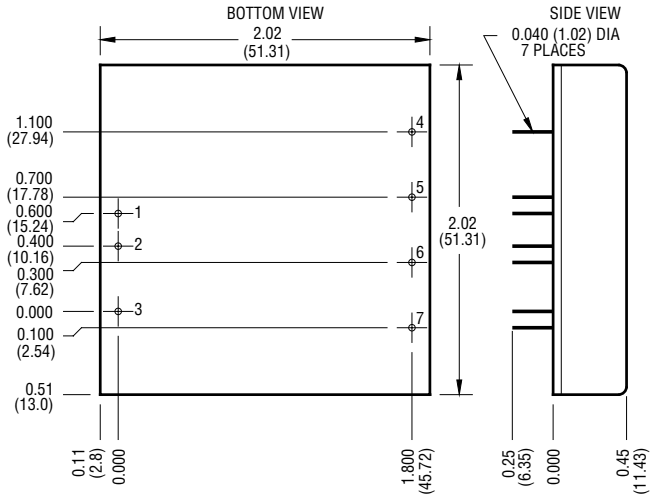
- Remote ON/OFF and TRIM
- Five-Side Shielded Copper Case
- Typical Efficiency up to 78%
- Fully Isolated and Filtered
- 700V Isolation
- Ultra Wide Range Input (4:1)

Selection Chart

Model	Input Range VDC (6)		Output VDC	Output mA
	Min	Max		
DGP12U5D5	3.5	16	±5	±1000
DGP12U5D12	3.5	16	±12	±500
DGP12U5D15	3.5	16	±15	±400

General Specifications (1)

All Models			Units
ON/OFF Function			
OFF Logic Level or Tie Pin to -Input (2)	MAX	< 0.4	VDC
Open Circuit Voltage	TYP	1.4	VDC
Input Resistance	TYP	2	Kohms
Converter Idle Current ON/OFF Pin Low	TYP	6	mA
Isolation (3)			
Isolation Voltage Input to Output 10μA Leakage	MIN	700	VDC
Input to Output Capacitance	TYP	375	pF
Output Trim Function			
Trim Range	MIN	±10	%
Input Resistance	MIN	10	Kohms
Environmental			
Case Operating Range, Tc No Derating	MIN MAX	-40 85	°C
Case Functional Range (4)	MIN MAX	-50 100	°C
Storage Range	MIN MAX	-55 105	°C
Thermal Impedance (5)	TYP	9.5	°C/Watt
General			
MTBF (Calculated)	TYP	800,000	HRS
Unit Weight	TYP	2.3 / 65	oz / gm
Chassis Mounting Kit		CM2B2	



Mechanical tolerances unless otherwise noted:
X.XX dimensions: ±0.020 inches
X.XXX dimensions: ±0.005 inches

Pin	Function
1	+INPUT
2	-INPUT
3	ON/OFF
4	+OUTPUT
5	COMMON
6	-OUTPUT
7	TRIM

NOTES

(1) All parameters measured at Tc = 25°C, nominal input voltage and full rated load unless otherwise noted. Refer to the Technical Reference Section for the definition of terms, measurement circuits and other information.

(2) See the DGP12 Series Application Notes for more information on applying the ON/OFF pin.

(3) The Case is tied to the -Input pin.

(4) The functional temperature range is intended to give an additional data point for use in evaluating this power supply. At the low functional temperature the power supply will function with no side effects, however, sustained operation at the high functional temperature will reduce expected operational life. The data sheet specifications are not guaranteed beyond the case operating range.

(5) The case thermal impedance is specified as the case temperature rise over ambient per package watt dissipated.

(6) Output power is reduced at 3.5V input. See DGP12 Series Application Notes for specific Derating guidelines

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TECHNICAL REVISIONS The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.

DGP12 SERIES – DUAL OUTPUT

Input Parameters (1)					
Model		**DGP12U5D5**	**DGP12U5D12**	**DGP12U5D15**	**Units**
Voltage Range (2)	MIN MAX		3.5 16		VDC
Input Current No Load 75% Load	TYP TYP	14 2300	23 2650	28 2680	mA
Switching Frequency	TYP		60		kHz
Maximum Input Overvoltage, 100ms Maximum	MAX		20		VDC
Turn-on Time, 1% Output Error	TYP		15		ms

Output Parameters (1)					
Model		**DGP12U5D5**	**DGP12U5D12**	**DGP12U5D15**	**Units**
Output Voltage		±5	±12	±15	VDC
Output Voltage Accuracy	MIN TYP MAX	4.95 5.00 5.05	11.90 12.00 12.10	14.90 15.00 15.10	VDC
Output Balance Plus to Minus Output, Full Load	TYP MAX		< 0.1 1.0		%
Rated Load Range (3)	MIN MAX	0 ±1000	0 ±500	0 ±400	mA
Load Regulation (4) Vin = 12 VDC	TYP MAX	0.1 0.7	0.1 0.5	0.1 0.5	%
Cross Regulation (5)	TYP	3	3	3	%
Line Regulation Vin = Min-Max VDC	TYP MAX		0.1 0.2		%
Short Term Stability (6)	TYP		< 0.05		%/24Hrs
Long Term Stability	TYP		< 0.1		%/kHrs
Noise, Peak - Peak (7)	TYP	120	50	50	mV_{PP}
RMS Noise, 0.01 - 1 MHz bw	TYP	35	15	15	mV_{rms}
Temperature Coefficient	TYP MAX		50 150		ppm/°C
Short Circuit Protection to Common for all Outputs			Short Term Current Limit		

NOTES

(1) All parameters measured at Tc=25°C, nominal input voltage and full rated load unless otherwise noted. Refer to the Technical Reference Section for the definition of terms, measurement circuits and other information.

(2) Reduced output power available below 9 volts input. See DGP12 Series Applications Notes for more information.

(3) No minimum load required for operation.

(4) Load regulation is defined for loading/unloading both outputs simultaneously. Load range is 25 to 100%.

(5) Cross regulation is defined for loading/unloading one output while the other output is kept at full load. Load range is 25 to 100%.

(6) Short term stability is specified after a 30 minute warmup at full load, constant line and recording the drift over a 24 hour period.

(7) Noise is measured per Technical Reference Section. Measurement bandwidth is 0-20 MHz for peak-peak measurements, 10 kHz to 1 MHz for RMS measurements. Output noise is measured with a 1µF/35V Tantalum capacitor located 1" away from the converter to simulate PCB standard decoupling.

DGP12 SERIES APPLICATION NOTES:

External Capacitance Requirements

No external capacitance is required for operation of the DGP12 Series. To meet the reflected ripple requirements of the converter, an input impedance of less than 0.05 Ohms from DC to 100KHz is required. If a capacitive input source is farther than 1" from the converter, an additional capacitor may be required at the input pins for proper operation. External output capacitance is not required for operation, however it is recommended that 1µF to 10µF of tantalum and 0.001 to 0.1µF ceramic capacitance be selected for reduced system noise. Additional output capacitance may be added for increased filtering, but should not exceed 400µF.

Output Power

The available output power of the DGP12 Series is reduced when operating below 9 volts. See Input Voltage Derating curve. Below 4.6 volts the output power is derated to 50% at 3.5 volts.

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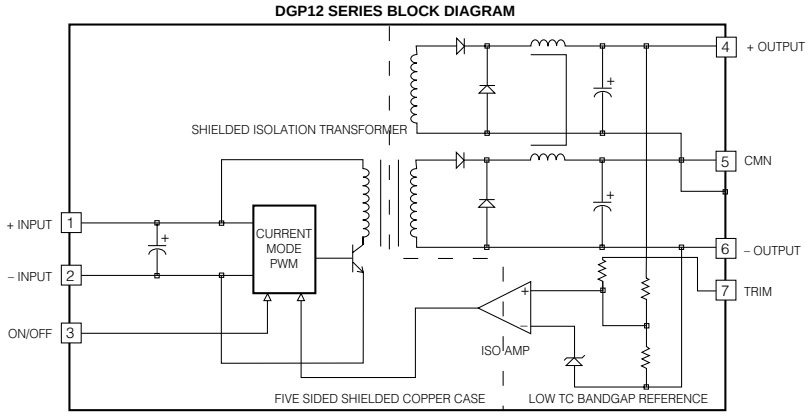

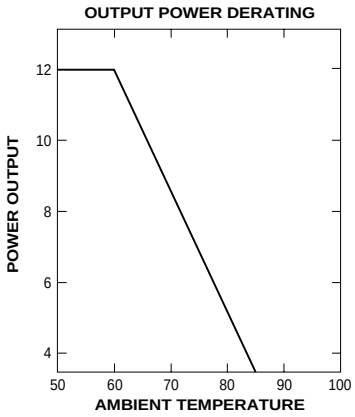

APPLICATION NOTES (cont'd):

Remote ON/OFF Operation

The remote ON/OFF pin may be left floating if this function is not used. It is recommended to drive this pin with an open collector/drain or a relay contact. When the ON/OFF pin is pulled low with respect to the -INPUT, the converter is placed in a low power drain state. The input capacitors are kept fully charged in the OFF mode. For proper operation, do not drive this input from a logic gate directly. The ON/OFF pin must be left floating for proper operation. Be aware that this input may be noise sensitive; use proper PCB design guidelines. The ON/OFF pin should never be pulled more than 0.3 volts below -INPUT or have a voltage greater than 2 volts applied.

Output TRIM

The TRIM pin may be used to adjust the output ±10% from the nominal setting. This function allows adjustment for voltage drops in the system wiring, as well 5.2 volt outputs for ECL applications. Figure 1 shows the proper connections to use this function. A trimpot value of 10KΩ should be used for the dual 5 volt output. A trimpot value of 20KΩ should be used for 12 and 15 volt outputs. If the TRIM function is not required the pin may be left floating.

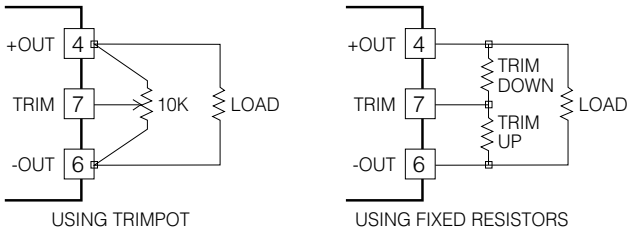

Figure 1.

Typical Performance: (Tc=25°C, Vin=Nom VDC, Rated Load)